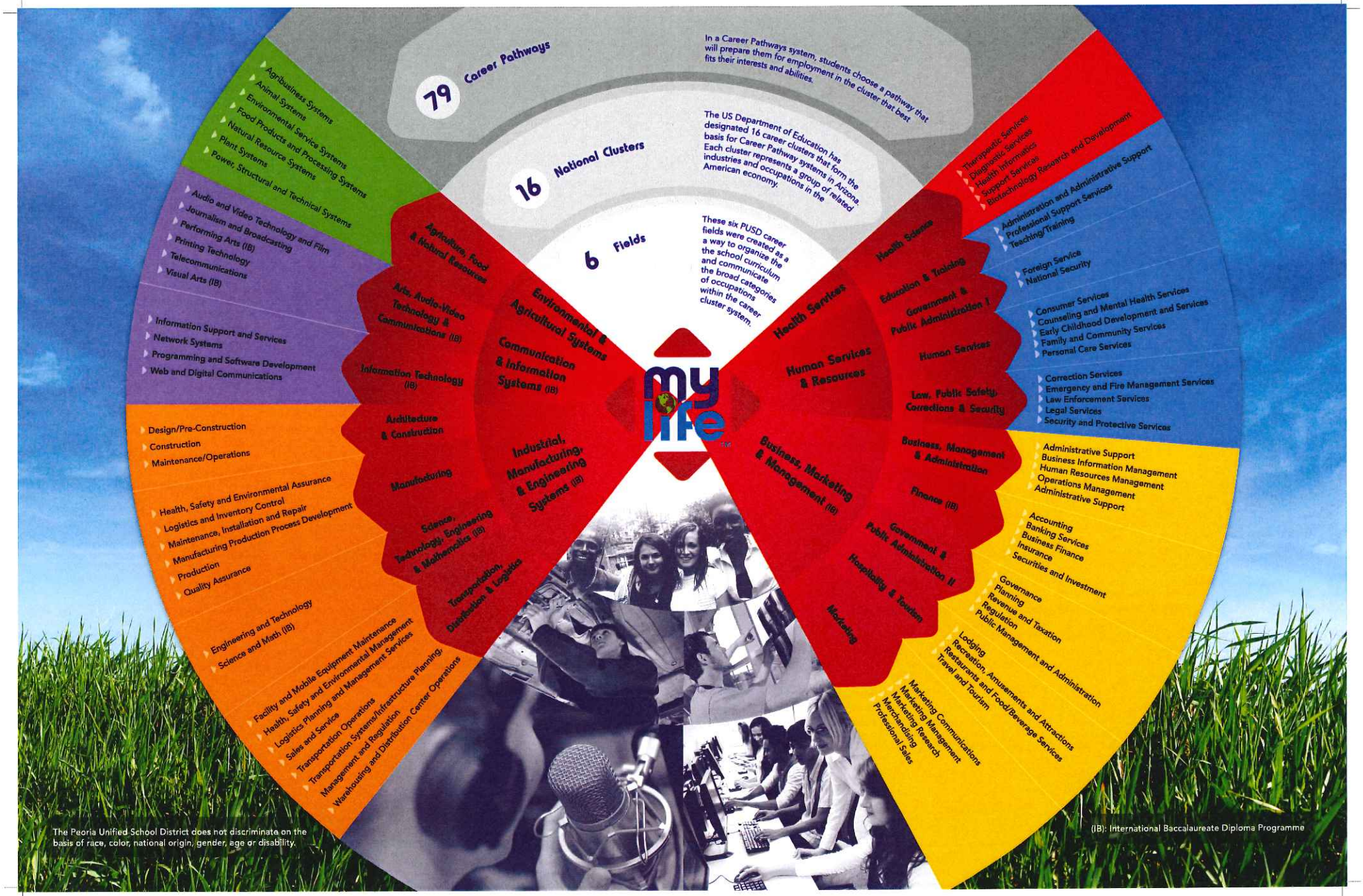
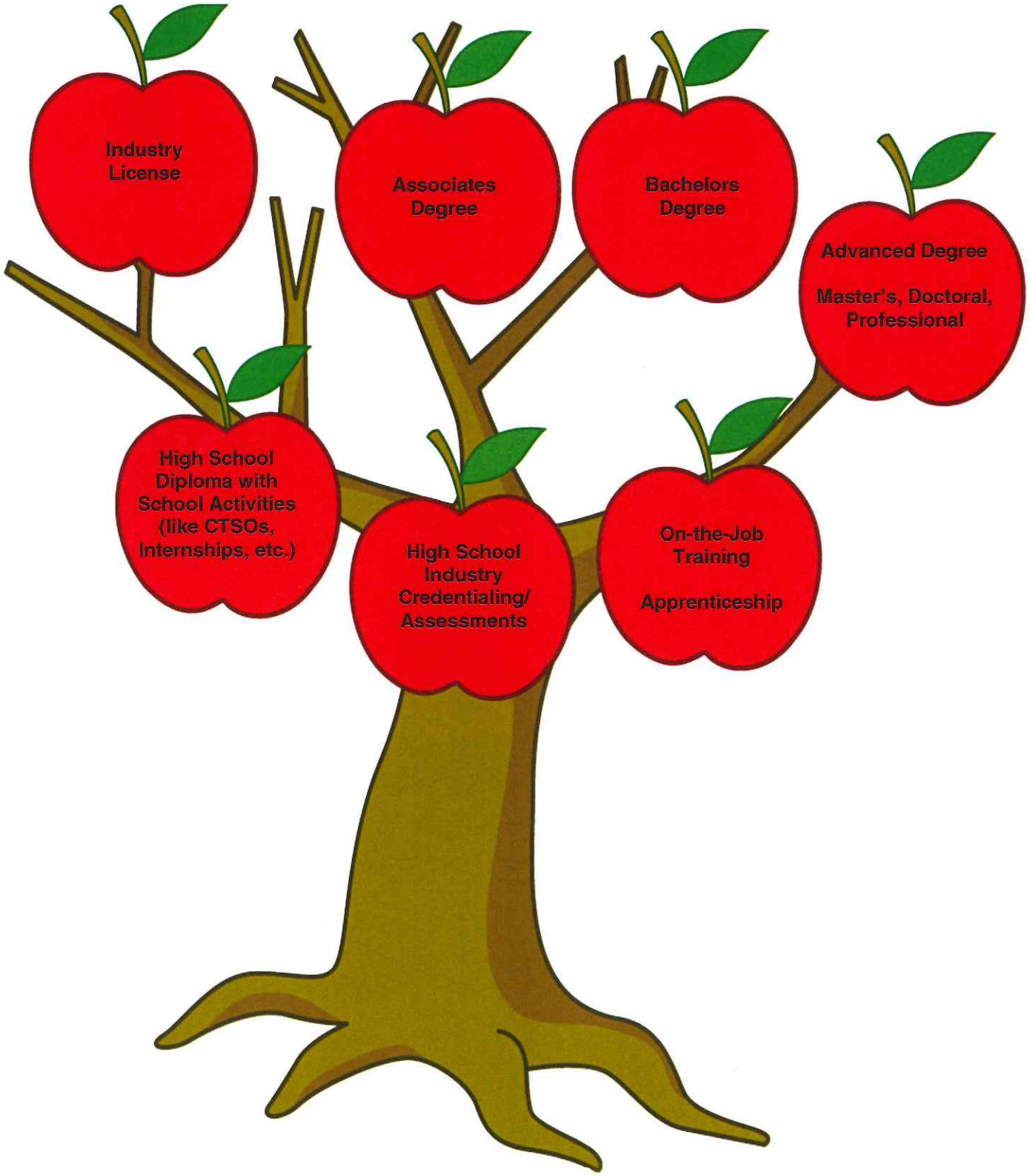
Career and Future Focused Education Vision

It's a Process

Prezi

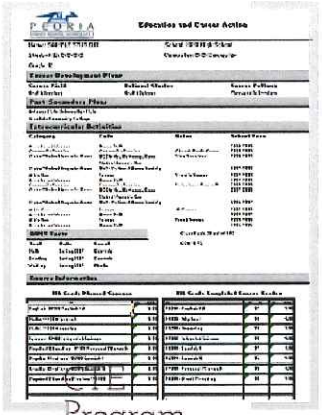

79 Career Pathways
In a Career Pathways system, students choose a pathway that will prepare them for employment in the cluster that best fits their interests and abilities.
16 National Clusters
The US Department of Education has designated 16 career clusters that form the basis for Career Pathway systems in Arizona. Each cluster represents a group of related industries and occupations in the American economy.
6 Fields
These six PUSD career fields were created as a way to organize the school curriculum and communicate the broad categories of occupations within the career cluster system.
my life
Agribusiness Systems
Animal Systems
Environmental Service Systems
Food Products and Processing Systems
Natural Resource Systems
Plant Systems
Power, Structural and Technical Systems
Agriculture, Food & Natural Resources
Environmental & Agricultural Systems
Audio and Video Technology and Film
Journalism and Broadcasting
Performing Arts (IB)
Printing Technology
Telecommunications
Visual Arts (IB)
Arts, Audio-Video Technology & Communications (IB)
Communication & Information Systems (IB)
Information Support and Services
Network Systems
Programming and Software Development
Web and Digital Communications
Information Technology (IB)
Design/Pre-Construction
Construction
Maintenance/Operations
Architecture & Construction
Industrial, Manufacturing, & Engineering Systems (IB)
Health, Safety and Environmental Assurance
Logistics and Inventory Control
Maintenance, Installation and Repair
Manufacturing Production Process Development
Production
Quality Assurance
Manufacturing
Science, Technology, Engineering & Mathematics (IB)
Engineering and Technology
Science and Math (IB)
Facility and Mobile Equipment Maintenance
Health, Safety and Environmental Management
Logistics Planning and Management Services
Sales and Service
Transportation Operations
Transportation Systems/Infrastructure Planning, Management and Regulation
Warehousing and Distribution Center Operations
Transportation, Distribution & Logistics
Therapeutic Services
Diagnostic Services
Health Informatics
Support Services
Biotechnology Research and Development
Health Science
Administration and Administrative Support
Professional Support Services
Teaching/Training
Education & Training
Foreign Service
National Security
Government & Public Administration I
Consumer Services
Counselling and Mental Health Services
Early Childhood Development and Services
Family and Community Services
Personal Care Services
Human Services
Human Services & Resources
Correction Services
Emergency and Fire Management Services
Law Enforcement Services
Legal Services
Security and Protective Services
Law, Public Safety, Corrections & Security
Administrative Support
Business Information Management
Human Resources Management
Operations Management
Administrative Support
Business, Management & Administration
Accounting
Banking Services
Business Finance
Insurance
Securities and Investment
Finance (IB)
Business, Marketing & Management (IB)
Governance
Planning
Revenue and Taxation
Regulation
Public Management and Administration
Government & Public Administration II
Lodging
Recreation, Amusements and Attractions
Restaurants and Food/Beverage Services
Travel and Tourism
Hospitality & Tourism
Marketing Communications
Marketing Management
Marketing Research
Merchandising
Professional Sales
Marketing
The Peoria Unified School District does not discriminate on the basis of race, color, national origin, gender, age or disability.
(IB): International Baccalaureate Diploma Programme


Industry License
Associates Degree
Bachelors Degree
Advanced Degree
Master's, Doctoral, Professional
High School Diploma with School Activities (like CTSOs, Internships, etc.)
High School Industry Credentialing/ Assessments
On-the-Job Training
Apprenticeship

cteworks Career and Future-Focused Education Vision

Career Field	High School Diploma with **School Activities**, On-the-Job Training	Industry License/ Certificate (High School Industry Credentialing/ Assessments)	Associate's	Bachelor's	Master's, Doctoral, Professional
All Career Fields	• High School Diploma	• Arizona CTE Technical Assessments (End-of-Program) • ASVAB (Armed Services Vocational Aptitude Battery Examination)	• Associates of Arts	• Liberal Studies	• Liberal Studies
Health Services	• **HOSA** • Clinical Rotation	• Certified Nursing Assistant • Licensed Practical Nurse • Medical Assisting – NRDA Certification (National Association of Health Professionals) • Dental Assistant	• Nursing • Radiologic (X-Ray) Technology • Surgical Technology • EMT and Paramedic • Athletic Trainer	• Physician Assistant • Registered Nurse • Biomedical Engineer	• Medical Scientists • Physical Therapists • Dentist • Pharmaceutical Sciences • Oncology Biology
Human Services	• **FCCLA, FEA, Skills USA** • Field Experience, Internship	• Cosmetology • ServeSafe Certification (Education Foundation of the National Restaurant Association) • Nail Technician	• Fire and Emergency Services Management • Hospitality Management • Interior Design • Paralegal	• Elementary Education • Secondary Education • Human Services Management	• Educational Leadership • Juris Doctor
Business, Marketing & Management	• **DECA, FBLA** • Cooperative Education	• Accounting – Basic Assessment (NOCTI*) • Business Financial Management Assessment (NOCTI*) • Certified Medical Administrative Assistant (National Healthcareer Association)	• Accounting • Business Administration • Management	• Accounting • Business • Management • Medical and Health Services Manager • Financial Examiner • Personal Financial Advisor	• Business Economics • Health Policy Management • Strategy

Success Factors



Career Field/ Cluster

Program Graduation Rate

CTE Technical Assessments

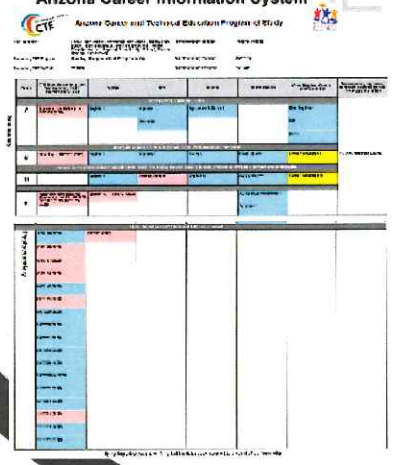
Industry Certification

AZ Transfer

Degree Obtainment

Gainful Employment

azcis Arizona Career Information System



Data System

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PEORIA UNIFIED SCHOOL DISTRICT NO. 11

Education and Career Action Plan (ECAP)

Name: SAMPLE STUDENT

Student ID: XXXXXXX

Grade: 12

School: XXXX High School

Counselor: XXXX Counselor

Career Development Plans

Career Field	National Cluster	Career Pathway
Health Services	Health Science	Therapeutic Services

Post-Secondary Plans

Arizona State University - Main

Glendale Community College

Extracurricular Activities

Category	Code	Notes	School Year
Awards and Honors	Honor Roll		2008-2009
Community Service	Community Service	Church Youth Group	2008-2009
Clubs/Student Organizations	HOSA-Health Occupations Student Association	Vice President	2008-2009
Clubs/Student Organizations	NHS - National Honor Society		2007-2008
Athletics	Soccer	Varsity Soccer	2007-2008
Awards and Honors	Honor Roll		2007-2008
Community Service	Community Service	Volunteer - Boswell Hosp	2007-2008
Clubs/Student Organizations	HOSA-Health Occupations Student Association		2007-2008
Clubs/Student Organizations	NHS - National Honor Society		2006-2007
Athletics	Soccer	JV Soccer	2006-2007
Awards and Honors	Honor Roll		2006-2007
Athletics	Soccer	Frosh Soccer	2005-2006
Awards and Honors	Honor Roll		2005-2006

AIMS Tests

Test	Date	Level
Math	Spring 2007	Exceeds
Reading	Spring 2007	Exceeds
Writing	Spring 2007	Meets

Class Rank: 56 out of 412

GPA: 3.75

Course Information

9th Grade Planned Courses

Course	Credit
English: 10140 English I H	1.00
Math: 11120 Algebra I	1.00
Math: 11200 Geometry	1.00
Science: 12100 Integrated Science	1.00
Physical Education: 17100 Personal Fitness B	1.00
Regular Electives: 16300 Spanish I	1.00
Regular Electives: 16301 Spanish II	1.00
Physical Education Elective: 14100 Band/Marching	1.00
Total Credits	8

9th Grade Completed Course Grades

Course	Grade	Credit
10140 - English I H	92	1.00
11120 - Algebra I	94	1.00
11200 - Geometry	91	1.00
12100 - Integated Science	91	1.00
16300 - Spanish I	97	1.00
16301 - Spanish II	96	1.00
17100 - Personal Fitness B	98	1.00
14100 - Band/Marching	98	1.00
-		
-		
-		
Total Credit		8

Arizona Career and Technical Education Program of Study

High School(s): Cactus High School, Centennial High School, Liberty High School, Peoria Ecampus, Peoria High School, Peoria Transition Center, Raymond S. Kellis High School, Sunrise Mountain High School

Post Secondary School: Phoenix College

Secondary CTE Program: Marketing, Management and Entrepreneurship

Post Secondary Program: Marketing

Secondary CTE CipCode: 52.1800

Post Secondary CipCode: 52.1401

Secondary

Grade	CTE Secondary courses and Postsecondary major courses and CTSOs	English	Math	Science	Social Studies	Other Required Courses and/or elective	Postsecondary degrees or certificates associated with the Program of Study
CTSO(s) for this program: DECA							
9	Business Foundations - GBS151 (3.00)	English I	Algebra I	Agriculture Science I		Marching Band	
			Geometry			PE	
						ROTC	
Administer Arizona's Instrument for Measuring Standards (AIMS) 10th Grade							
10	Marketing - MKT271 (3.00)	English II	Algebra II	Biology	World History	Foreign Language I	PC AAS Marketing (3094)
College course placement assessments administered, academic/career advising, additional preparation strategies identified and implemented							
11		English III	4th Year Math	Chemistry	AZ/US History	Foreign Language II	
12	Advanced Marketing/Work Experience - GBS110 (3.00) GBS175 (3.00) MGT175 (3.00)	English IV - ENG101 (3.00)			AZ/American Government		
					Economics		
Administer Arizona's CTE Technical Skills Assessment							

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ISSUE SHEET

FEBRUARY 2009

Career and Technical Education's Role in

Dropout Prevention

In the past 50 years, high school completion has grown in importance as the labor market has been transformed in the knowledge economy. Yet alarmingly, nearly one in every three students who start high school in the ninth grade fails to complete the 12th grade within four years. Literally millions of young people are out of school and grossly ill equipped to compete in the 21st century workforce and economy.

CTE Provides a Solution

High-quality *career and technical education* (CTE) can help more students persist in and complete high school, preparing them for the postsecondary education and training that will be critical to future economic successes.

- Students have a decreased risk of dropping out of high school as they add CTE courses to their curriculum, up to a point at which they are taking one CTE course for every two academic courses. (*Plank, et al., "Dropping Out of High School and the Place of Career and Technical Education," National Research Center for Career and Technical Education, 2005.*)
- High-risk students are eight to 10 times less likely to drop out in the 11th and 12th grades if they enroll in a CTE program instead of a general program. (*Kulik, "Curriculum Tracks and High School Vocational Studies," University of Michigan, 1998.*)
- The National Dropout Prevention Center/Network has identified the 15 strategies that have the most positive impact on the dropout rate. These strategies include "career and technology education." According to the Center, "A quality CTE program and a related guidance program are essential for all students." (*National Dropout Prevention Center/Network, "Effective Strategies for Dropout Prevention."*

Increasing Student Engagement

What the research suggests is that today's CTE offers students relevant learning experiences that answer the age-old question "Why do I have to learn this?" while at the same time enhancing students' academic achievement and meeting industry needs. CTE has become a leader in ensuring flexible, relevant learning opportunities to engage students and provide a real-world, career-oriented curriculum.

- One significant reason students drop out of school is that they lose interest and motivation in education because the curriculum does not seem to have a real-world application (*Bridgeland, Dilulio & Morison, "The Silent Epidemic: Perspectives of High School Dropouts," 2006*). Academics are often presented in isolation, instead of in a way that shines a spotlight on how the subject is applicable in the context of the real world.
- A 2006 poll by Peter D. Hart Research Associates, Inc. of at-risk California ninth- and 10th-graders found that six in 10 respondents were not motivated to succeed in school. Of those students, more than 90 percent said they would be more engaged in their education if classes helped them acquire skills

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Facts About Career and Technical Education

Career and Technical Education (CTE) is crucial to providing the strong workforce training needed to fill the good-paying jobs vital to restoring the economic health of our nation. CTE programs also produce strong educational returns, strengthening student engagement in school, achievement in academics and technical skills, and transitions from high school to postsecondary education and from education to careers.

CTE-Related Jobs Are in High Demand

- According to the Georgetown University Center on Education and the Workforce, 30% of the 46.8 million job openings created by 2018 will require some college or a two-year associate degree. (Carnevale, Anthony, et al, *Help Wanted: Projections of Jobs and Education Requirements Through 2018*, Center on Education and the Workforce, Georgetown University, 2010, p. 13)
- The Bureau of Labor Statistics (BLS) projects that middle-skill jobs (jobs that generally require some significant education and training beyond high school but less than a bachelor's degree) will account for about 45% of all job openings projected through 2014. (BLS, *Occupational Outlook Handbook, 2010-2011 Edition*)
- Of the occupations requiring postsecondary education, those requiring an associate degree are projected to grow the fastest, at about 19 percent. (BLS, *Occupational Outlook Handbook, 2010-2011 Edition*)
- Nearly one in six "hot jobs," jobs paying above the median wage and having above average growth, will require an associate degree or some postsecondary training. (American Association of Community Colleges)
- By 2018, the U.S. will need at least 4.7 million new workers with postsecondary certificates, according to the Georgetown University Center on Education and the Workforce. (Carnevale, Anthony, et al, *Help Wanted: Projections of Jobs and Education Requirements Through 2018*, Center on Education and the Workforce, Georgetown University, 2010, p. 1)

CTE Meets Individual and Community Economic Needs

- Participation in skills-training programs increased wages and earnings, raised the probability and consistency of employment, and led to work in higher-quality jobs, according to Public/Private Ventures. (Maguire, Shiela, et al, *Job Training That Works: Findings from the Sectoral Employment Impact Study*, 2009)
- A person with an associate degree or two year credential will earn, on average, over $5,000 a year more than a person with just a high school diploma and a person with a CTE-related associate degree or credential will earn between $5,000 and $15,000 more a year than a person with a humanities or social sciences associate degree. (Jacobson, L., et al, *Pathways to Boosting the Earnings of Low-Income Students by Increasing Their Educational Attainment*, Gates Foundation/Hudson Institute, 2009)
- According to the Georgetown University Center on Education and the Workforce, 43% of young workers with Licenses and Certificates earn more than those with an associate degree, 27% of young workers with Licenses and Certificates earn more than those with a bachelor's degree, and 31% of young workers with associate degrees earn more than those with a bachelor's degree. (Center on Education and the Workforce, *Valuing Certificates*, Presentation, 2009)
- According to the Florida Department of Education, recent graduates who earned a career-focused associate degree or postsecondary certificate from a Florida community college are earning up to $11,000 more than bachelor's degree recipients from the state's eleven public universities. (Florida Department of Education, 2011)
- According to the state of Washington, for every dollar spent on secondary CTE students, federal and state governments will receive seven dollars back in social security, Medicare and federal and state taxes. (Washington State Workforce Training and Education Coordinating Board, *Workforce Training Results-2006*, January 2007)

Career and Technical Programs of Study: A Design Framework

The Carl D. Perkins Career and Technical Education Act of 2006 (Perkins IV) calls for states to offer "career and technical programs of study," which may be adopted by local educational agencies and postsecondary institutions, as an option to students (and their parents as appropriate) when planning for and completing future coursework. These programs, at a minimum, must:

- Incorporate and align secondary and postsecondary education elements,
- Include academic and CTE content in a coordinated, non-duplicative progression of courses,
- Offer the opportunity, where appropriate, for secondary students to acquire postsecondary credits, and
- Lead to an industry-recognized credential or certificate at the postsecondary level, or an associate or baccalaureate degree.

Each local recipient of Perkins funds must offer at least one career and technical program of study.

To help states and local recipients meet these requirements, the Office of Vocational and Adult Education (OVAE), in collaboration with major national associations, organizations, and states, have formulated a "career and technical programs of study design framework (framework)." The framework identifies a system of 10 components that, taken together, support the development and implementation of effective programs of study. Although all 10 components are important, they are neither independent nor of equal priority: State and local program developers must identify the most pressing components for state or local adoption, taking into consideration their relative need within their educational context.

PROGRAM OF STUDY (POS) COMPONENTS AND SUBCOMPONENTS

1. LEGISLATION AND POLICIES

Federal, state, and local legislation or administrative policies promote POS development and implementation.

Effective legislation and policies should:

- Provide for state and/or local funding and other resources, such as professional development and dedicated staff time, for POS development.
- Establish formal procedures for the design, implementation, and continuous improvement of POS.
- Ensure opportunities for any secondary student to participate in a POS.
- Require secondary students to develop an individual graduation or career plan.
- Provide resources for long term sustainability of POS.

5. COLLEGE AND CAREER READINESS STANDARDS

Content standards that define what students are expected to know and be able to do to enter and advance in college and/or their careers comprise the foundation of a POS.

Rigorous college and career readiness standards should:

- Be developed and continually validated in collaboration with secondary, postsecondary, and industry partners.
- Incorporate essential knowledge and skills (i.e., academic skills, communication, and problem-solving), which students must master regardless of their chosen career area or POS.
- Provide the same rigorous knowledge and skills in English and mathematics that employers and colleges expect of high school graduates.
- Incorporate industry-recognized technical standards that are valued in the workplace.
- To the extent practicable, be internationally benchmarked so that all students are prepared to succeed in a global economy.

6. COURSE SEQUENCES

Non-duplicative sequences of secondary and postsecondary courses within a POS ensure that students transition to postsecondary education without duplicating classes or requiring remedial coursework.

Well-developed course sequences should:

- Map out the recommended academic and career and technical courses in each POS.
- Begin with introductory courses at the secondary level that teach broad foundational knowledge and skills that are common across all POS.
- Progress to more occupationally-specific courses at the postsecondary level that provide knowledge and skills required for entry into and advancement in a chosen POS.
- Offer opportunities for students to earn postsecondary credit for coursework taken during high school.

7. CREDIT TRANSFER AGREEMENTS

Credit transfer agreements provide opportunities for secondary students to be awarded transcripted postsecondary credit, supported with formal agreements among secondary and postsecondary education systems.

Well-development agreements:

- Provide a systematic, seamless process for students to earn college credit for postsecondary courses taken in high school, transfer high school credit to any two- and four-year institution in the state that offers the POS, and transfer credit earned at a two-year college to any other two- or four-year institution in the state that offers the POS.
- College credit should be automatically transcripted at the college for high school students so that they can transfer seamlessly into the postsecondary portion of a POS without the need for additional paperwork or petitioning for credit.
- Describe the expectations and requirements for, at a minimum, teacher and faculty qualifications, course prerequisites, postsecondary entry requirements, location of courses, tuition reimbursement, and credit transfer process.

- Result in the awarding of secondary credit, postsecondary credit, or a special designation on a student's high school diploma.
- Incorporate performance-based assessment items, to the greatest extent possible, where students must demonstrate the application of their knowledge and skills.

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[i] The 10 elements are: (1) statewide student identifier; (2) student-level enrollment data; (3) student-level test data; (4) information on untested students; (5) statewide teacher identifier with a teacher-student match; (6) student-level course completion (transcript) data; (7) student-level SAT, ACT, and Advanced Placement exam data; (8) student-level graduation and dropout data; (9) ability to match student-level P-12 and higher education data; and (10) a state data audit system.

[ii] See http://cte.ed.gov/acrn/ncdg/ncdg_what.htm.

Additional Resources for CTE and Dropout Reduction:

- Pathways to Prosperity: http://www.gse.harvard.edu/news_events/features/2011/Pathways_to_Prosperity_Feb2011.pdf
- The Skills Imperative: How Career and Technical Education Can Solve the U.S. Talent Shortage http://icw.uschamber.com/sites/default/files/The_Skills_Imperative_0.pdf
- College and Career Ready in the 21st Century (book): http://www.amazon.com/College-Career-Ready-21st-Century/dp/0807753238
- Learning for Jobs: http://www.keepeek.com/Digital-Asset-Management/oecd/education/learning-for-jobs_9789264087460-en